

# THE IBIS.

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## SEVENTH SERIES.

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No. XXIII. JULY 1900.

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### XXIII.—*A Fortnight's Egg-collecting in Asia Minor.*

By F. C. SELOUS.

EARLY on the morning of May 5th, 1899, I landed at Smyrna, and at once proceeded to the village of Bournabat, some six or seven miles distant, where I was soon discussing a hearty breakfast, beneath the hospitable roof-tree of my old friend Mr. H. O. W——. In the afternoon I walked out to a deep gorge through the hills, about six miles distant from Bournabat, where a pair of Egyptian Vultures was said to breed annually. My guide was an old Greek named Demetrius, who knew something about birds'-nesting, as he had accompanied Dr. Krüper, the curator of the Natural History Museum at Athens, on several of his ornithological trips. He had not, however, imbibed much scientific knowledge, as he seemed to imagine that the object of egg-collecting was merely to get eggs of as many different sizes as possible.

We were unsuccessful in discovering the nesting-site of the Egyptian Vultures, nor did we see any of the birds themselves; but a pair of Lämmergeiers were soaring over the precipitous face of the hill above the gorge, where I have no doubt they had a nest with young ones, for these birds are very early breeders in Asia Minor. On the way home we found two nests of the Woodchat-Shrike (*Lanius pomeranus*), one containing two, and the other seven eggs. We also

discovered the nest of a Black-eared Wheatear (*Saxicola albicollis*) in a crevice of an old stone wall, just ready for eggs, and when quite close to Bournabat we were shown the nest of a Crested Lark (*Galerita cristata*) by a shepherd-boy. This nest contained four eggs which were much incubated. It was placed in a field of standing corn, in a depression of the ground, and closely resembled the nest of a Sky-Lark. Among the many birds we saw during our walk, Rollers (*Coracias garrulus*), Bee-eaters (*Merops apiaster*), and Black-headed Buntings (*Emberiza melanocephala*) were the most noticeable from their conspicuous plumage. The males of the last species, in full nuptial dress, were very abundant and very tame, and when sitting on a bush or a small olive-tree, with throat swelled out and in full song, would allow one to approach within a few yards of them without taking alarm. Besides the Woodchat-Shrikes, which were very common, we also saw several Masked Shrikes (*Lanius nubicus*). I could not identify all the Warblers I saw, but I recognized the Orphean Warbler (*Sylvia orphæa*), which is, I think, a common species in this district of Asia Minor.

On the following day, May 6th, I went in Mr. W——'s launch to a place on the coast, a few miles from Smyrna, where salt is made by flooding shallow mud-pans with seawater and then allowing the water to evaporate by the heat of the sun. Here are some small flat islands, standing in very shallow water, where many birds breed. But it was still too early in the season for eggs. I saw Common, Lesser, and Gull-billed Terns, Pratincoles and Kentish Plovers, and also great numbers of Black-headed Wagtails (*Motacilla melanocephala*); but I found only one nest of the Kentish Plover (*Ægialitis cantiana*), with three eggs a good deal incubated, and also saw a young one in down of the same species just hatched out. These were probably two early nests, and I feel sure that the Terns, Pratincoles, and most of the Kentish Plovers had not yet laid. On our way to the salt-works we saw many Mediterranean Black-headed Gulls (*Larus melanocephalus*) and a few Yellow-legged Herring-Gulls (*L. cucullians*).

Getting back to Bournabat late the same evening, I proceeded by rail next morning to Aidin, which is distant about one hundred miles south-east from Smyrna. I noticed many birds along the line, numbers of Purple Herons and Little Egrets flying up from a marsh we passed through, while Rollers, Bee-eaters, Little Owls, and Lesser Kestrels were always to be seen perched on the telegraph-wires. I had been told that numbers of Egyptian Vultures nested in the cliffs behind Aidin, and as soon as we had had something to eat Demetrius and I sallied forth on a tour of inspection. We soon saw several Vultures flying round, and in the course of the afternoon discovered two fresh nests, neither of which would have been approachable without the assistance of a light rope-ladder which I had brought with me from England. There were no eggs in the first nest we examined, though it seemed just ready for them; but the second nest, which was in a small cave, within six feet of the top of the cliff, contained two very handsome red-blotched eggs, which were slightly incubated.

On the following morning, May 8th, we took another Egyptian Vulture's nest with two slightly-incubated eggs, and saw three other nests with the birds sitting on them, which we could not reach. We also found the nest of a Black-eared Wheatear (*Saxicola albicollis*) in a hole in the rocks, with six fresh eggs, one of which was broken in getting out the nest. We also saw a great many Rollers fly out of holes in the cliffs, as well as Little Owls (*Athene noctua*) and Lesser Kestrels (*Falco cenchris*), but could find no eggs. Neither the Rollers nor the Lesser Kestrels had yet laid, I think, and the Little Owls that we disturbed were, I suppose, not in their nesting-holes. In the afternoon I spent three hours hunting for small birds' nests, among the gardens and fields in the plain below the town of Aidin; but although I had the assistance of Demetrius and three local Greek boys, we found only one nest, that of an Olivaceous Warbler (*Hypolais pallida*), between us. This nest was built in the fork of a branch of a pomegranate-tree, about 10 feet from the ground; it was very small and neatly made, with a

deep cup, and contained four eggs of a very pale pinky white sparsely dotted over with small black spots. In the course of the afternoon we saw a pair of Northern Nightingales (*Daulias philomela*), but I was very much disappointed at the extreme scarcity of small birds of all kinds in this very inviting-looking hunting-ground.

The next morning we again hunted for nests near Aidin for five hours, but were absolutely unsuccessful, as we did not find a single nest. We left by the midday train for Appa, which we reached at 5 P.M. Appa is a small Turkish village situated at the eastern extremity of the Maimun Dagh—Monkey Mountain—and is about 240 miles inland from Smyrna. The character of the country is that of wide, arid, treeless plains, bounded by mountain-ranges. These plains lie at an altitude of about 3000 feet above sea-level. In the evening I found two Crested Larks' nests within a mile of the station building. I put the birds off both nests, one of which contained four and the other five eggs. I also found the nest of a Rock-Sparrow (*Petronia stulta*) in the bank of a railway-cutting close to the station. We caught the bird on the nest, but, though this was just ready for eggs, there were unfortunately none in it. The hole at the end of which this nest had been placed had been bored four feet into the sandy bank. It looked just like a Kingfisher's nesting-hole, but whether it had been made by the Rock-Sparrows themselves I cannot say. It may have been made by a Bee-eater, though against this is the fact that there were no other holes near it. There was a large cavity at the end of the bore-hole, and in this a bulky nest had been built of grass lined with feathers.

I had come to Appa because, while hunting wild goats on the Maimun Dagh in the early spring of 1897, I had noticed a number of Cranes (*Grus communis*) feeding on the marshy ground on the edge of a large salt-lake which extends from the foot of the Monkey Mountain to the opposite range of the Zuut Dagh. This salt-lake, from which the water almost entirely evaporates in hot weather, must be nearly 20 miles in circumference, and is called by the Turks of the neighbourhood "Adji toos Gol." It was early in March

when I had seen the Cranes, and although they were then all collected together in a flock, they looked to me as if they were commencing to pair, as they appeared to be restless and excited, and the males were continually giving vent to their loud trumpeting cry. Moreover, the Turkish hunter who was with me had assured me that the Cranes remained in the marshes near the salt-lake all the year round, and said he had seen young ones, though he had never come across a nest.

On May 10th, 1899, the morning after my arrival at Appa, I was up at 5 A.M., and after a light breakfast went down to the railway-line in a trolley which the superintendent of the Aidin Railway—a hospitable German, then resident at Appa—had kindly placed at my disposal. We proceeded to a point close to the edge of a large extent of marsh where we had seen some Cranes stalking about on our way up the line from Aidin on the previous day, and it was here that the men I had with me said that these birds were in the habit of nesting. I was accompanied by two men and three youths, and we quartered the ground systematically for four hours, wading backward and forward in line. The vegetation growing in this salt-marsh was not reeds, but a coarse kind of grass, from a foot to two feet in height. The water was usually not more than ankle-deep, and never came up to my knees. The mud underneath, when disturbed, emitted a very strong and disagreeable stench, and the heat of the sun was very great. The thermometer in our railway-carriage had registered 96° in the shade with all the windows open on the previous day. The heat, the flooded plain, and the foul-smelling mud, all combined to call to my mind the remembrance of many a hunt I had had after *Leechwe* antelopes, in the swamps of South Central Africa in days long gone by.

We found several Cranes' nests; three with two eggs each, two with one egg only, and two more with nothing in them, or rather on them, for they were nearly flat. I don't think the young birds had been hatched out of these nests, as they were quite clean, and there were no signs of egg-shells about; but one of the youths with me found a young Crane only just

hatched out, a little yellow brown-brindled downy thing, with already longish legs, neck, and bill. All the eggs I got were considerably incubated, though I managed to blow them without much difficulty with a good large hole. The fact that I found two Cranes' nests each containing only one egg, which must have been sat on for some time, seems to show that these birds do not always lay two eggs. The nests were low, flat structures, of beaten-down grass, from 18 inches to two feet in diameter, resting on the grass-covered mud; but, as they were about three inches in thickness, they were quite dry. These Cranes' nests were difficult to find, as the birds left them and walked slowly away when we were still a long distance from them. On one occasion I saw a Crane fly up from the marsh about 500 yards ahead, and marking the spot as well as I could, I kept my eyes fixed on it, and, wading straight to it, found the nest with two eggs. This, however, was the only bird which flew from its eggs. I also marked a Marsh-Harrier (*Circus æruginosus*) rise from the swamp, and made sure it had a nest, but found nothing. There were likewise a number of Peewits (*Vanellus cristatus*) flying about the drier portions of the marsh, and we saw a number of Ruddy Sheld-ducks (*Casarca rutila*) either sitting just on the edge of the salt-lake or flying over the marsh. These birds nest in holes and crevices among the rocks on the lower slopes of the Maimun Dagh, and are early breeders, as the men with me told me that they had all of them already taken their broods from the mountain to the salt-lake.

After having finished with the Cranes we went up into the Maimun Dagh and took an Egyptian Vulture's nest, with two very handsomely-marked eggs. We also found two nests of the Syrian Rock-Nuthatch (*Sitta syriaca*), each containing seven eggs—one clutch being unfortunately much incubated. These nests were made of mud stuck on to an overhanging rock. They looked like very large House-Martins' nests, prolonged into a narrow passage, at the end of which was the small round hole for entrance or egress. In one case the entrance-passage and hole (only about an inch in diameter) were built against the overhanging rock, but in the other the entrance-

passage protruded from the centre of the mud nest. These nests were very strongly and solidly built, and I had to hit them with a stone in order to break them open; they were thickly and warmly lined with soft hair closely felted together, and had all the appearance of having been used for many years, as the clay of the prolonged narrow entrance-passages had assumed a grey, hard, stony appearance.

On the plain between the marsh and the mountain I found another Crested Lark's nest with five eggs, and a Turkish shepherd-boy showed me a Bunting's nest, containing five eggs, in a cornfield, just outside a village. This nest was built right on the ground beside a stone, and the eggs much resembled those of the Yellow-hammer. However, the Yellow-hammer does not breed in this, or I believe in any, part of Asia Minor, and I have no doubt that it was a nest of Cretzschmar's Bunting (*Emberiza casia*), a species which is not uncommon in that country. While returning to Appa along the railway-line we dug out four Rock-Sparrows' nests. Three of these were just ready for eggs, and the fourth contained young birds just hatched out. These nests were all made in holes that had been bored, to a depth of about four feet, into the cuttings and embankments along the railway-line. Late in the evening, while strolling about on the plain quite close to the station-buildings, I almost trod on a Short-toed Lark (*Calandrella brachydactyla*) sitting on three eggs, which were so much incubated that I was able to blow them only with great difficulty.

Early the next morning I found another Short-toed Lark's nest, also with three eggs, somewhat incubated. In a village about a mile from the railway-station I found two colonies of Spanish Sparrows (*Passer salicicola*) busy building all round the sides of two Storks' nests. These latter were immense structures, the accumulation of many years, placed in trees some ten feet above the ground, and the Spanish Sparrows' nests were built all round them, and so close together that they filled almost every interstice in the great piles of sticks. The nests were very much like those of the Common Sparrow (*Passer domesticus*), loose

structures of grass, lined with feathers, and with the entrance-hole on one side. I suppose there were over fifty Sparrows' nests built round each Stork's nest. Most of the former were still unfinished, and though some had already received their feather lining, none had eggs in them. Many Lesser Kestrels flew out from under the eaves of the village houses, but we could find no eggs, and I do not think these birds had yet laid. In the afternoon I took the nest of a Calandra Lark (*Melanocorypha calandra*) with four eggs, and late in the evening a Turk showed me the nest, on a stony hillside, of a Chukar Partridge (*Caccabis chukar*), containing five fresh eggs.

The next day, May 12th, I left Appa at 7.30 A.M., and, passing Aidin at midday, arrived at Balachik at 1 o'clock. I was now on my way to a large lake and swamp near the mouth of the Meander river, where my friends in Bournabat had told me that various kinds of Herons and numerous species of water-fowl, including wild Swans, were accustomed to breed. Mr. E. W—— had given me a letter to a Greek, living at a village called Sakizbounou, who said he would be able to get men to help me to explore the marsh. I had to go by rail to a place called Sokia, where is a liquorice factory belonging to an English company, and from there ride or drive to the lake. On reaching Balachik I found I had to wait four hours for the train to Sokia, so I went out nesting among the gardens and orchards in the neighbourhood. Birds, however, seemed very scarce, and I found only two Goldfinches' nests, the one with four, and the other with five eggs, in a garden near the station-buildings. On arriving at Sokia at 6 P.M., the Greek station-master, who spoke English very well, and to whom I also had a letter of introduction, said he did not think I would be able to get on to Sakizbounou that night, but promised to get either a carriage of some sort or riding-horses to take me and my two servants (Demetrius and a Turk) there the first thing the next morning. Later in the evening I walked up to the liquorice factory with the station-master and was introduced to Mr. B. H——,

the superintendent. As soon as he heard of my projected expedition to the lake and marshes at the mouth of the Meander, Mr. H——, who is a good sportsman and has the tastes of a naturalist, offered to go with me, and as his time was limited we determined to start that very night. We at once set to work on our preparations, and by midnight had everything ready. We sent one man on ahead with a pack-horse carrying our baggage—which we cut down to the smallest limits—and then lay down to rest for an hour and a half. We then had something to eat and a cup of tea, and started for Sakizbounou at about 2 A.M. I left Demetrius behind with instructions to return to Bournabat the next day, but took with me my Turkish servant, who carried a shot-gun, while Mr. H—— was accompanied by a trusty Circassian armed with a rifle.

After leaving the town of Sokia we rode westward down the valley of the Meander, keeping the dim figure of the Circassian—who, being intimately acquainted with the country, acted as our guide—constantly in view. At first the path we were following led us along the river's bank, and then we struck across a great open plain. We passed several Yuruk encampments, round which the shadowy forms of camels and horses were feeding, and much disturbed the equanimity of the great wolf-like sheep-dogs, which always left their charge and escorted us for several hundred yards on our journey, barking most furiously all the while. Just as day was breaking we came to a small village on the bank of the Meander. There must have been more than fifty pairs of Storks nesting in this small village, and every hovel had two or three nests on it. In most of these the young birds had already been hatched, but some still contained eggs, on which the females were sitting. Although it was as yet scarcely daylight the great majority of the Storks were already on the look-out for food. They were walking about in crowds just outside the village, very like flocks of geese, and were almost as tame.

About 6 o'clock on the morning of May 13th we reached Sakizbounou, a small Turkish village on the Meander

river, halfway between a large open lake and a vast marsh almost entirely covered with reeds. The water of both the lake and the marsh is brackish, but not exactly salt. The Greek to whom we had brought a letter of introduction we found to be a very intelligent-looking, civil, and obliging man; he kept a sort of inn, and rented a fishery on the lake from the Turkish Government. Noticing many Lesser Kestrels flying in and out of the loft above the inn, we at once explored it and found several clutches of eggs, smaller and lighter in colour than those of the Common Kestrel. In some cases a slight apology for a nest had been made, but more often the eggs were laid in some inequality of the floor of the loft. Just outside the inn a large tree was growing, among the rather scanty foliage of which I noticed a nest suspended at the end of a long thin branch, at a height of about 25 feet from the ground. It proved to be that of a Penduline Tit (*Egithalus pendulinus*), but was not quite ready for eggs. This nest was beautifully made of a kind of wild cotton closely felted together, camel's hair being used to attach it to the branch at the end of which it hung. In shape it closely resembled the nest of a Long-tailed Tit, but the entrance-hole, instead of being flush with the side, was at the extremity of a neatly-made passage, over an inch in length and less than an inch in diameter. From the inland plains of Asia Minor, where sheep and camels are numerous, I have seen nests of the Penduline Tit made entirely from the wool and hair of these animals.

After we had had something to eat, Mr. B. H—— and I started for the marsh. We were accompanied by our own two servants, and two or three local men who were to act as guides, all of us being mounted. We first crossed the Meander on a ferry, and then rode some two or three miles across an open plain, to the edge of the marsh. While crossing the plain we saw several large flocks of Rose-coloured Pastors (*Pastor roseus*), which frequently settled on the ground. I believe that these birds are late breeders, and fancy that those we saw were on their way to their breeding-grounds.

Soon after we reached the edge of the marsh we began to see many interesting birds: a pair of Black-winged Stilts (*Himantopus candidus*), two pairs of Spur-winged Plovers (*Hoplopterus spinosus*), Great White Egrets (*Ardea alba*), Little Egrets (*Ardea garzetta*), Purple Herons (*Ardea purpurea*), Night-Herons (*Nycticorax griseus*), Squacco Herons (*Ardea ralloides*), and Little Bitterns (*Ardetta minuta*). A good many Ducks, too, were flying about, of species which I could not identify with any certainty, besides numbers of graceful swallow-like White-winged Black Terns (*Hydrochelidon leucoptera*). Among the bushes which here and there skirted the marsh flitted numbers of Grey-backed Warblers (*Aëdon familiaris*), conspicuous from their ruddy brown tails, which when expanded showed the edging of black and white very plainly. These birds had, I fancy, only just arrived in Asia Minor from their winter haunts in Africa, and had not yet commenced to nest.

When Mr. B. II— questioned our guides as to where the different species of Herons and Egrets nested, we found that they had no exact knowledge themselves, though they said they would be able to get precise information from some of the shepherds who were scattered over the plain near the marsh, tending herds of camels, horses, and cattle. One after another of these men was, however, cross-examined and found to be hopelessly ignorant of the actual breeding-sites of the birds the eggs of which we wished to take. Everyone professed to know that all the many sorts of birds we had seen nested somewhere in the reeds, but as the marsh before us was miles and miles in extent this general knowledge did not help us much. At last we came across a man who told us that he could show us nests and eggs in the reeds, and as he said he had taken 500 eggs only a few days before for food, we thought he must know the breeding-station of a Heron-colony. He told us that the water in the marsh was nowhere deep, and offered to take us on horseback to that part of it where he had lately collected numbers of eggs, if we would wait until he caught one of

his horses. This he quickly did, and Mr. B. H—— and myself—each of us carrying a light collecting-box slung over our shoulders—were soon riding behind our guide down a narrow open channel of water leading out into the marsh. The depth of the water varied from two to four feet, but was seldom less than three; the bottom, however, was hard and sound, so that the horses never floundered about. Sometimes the reeds were fairly thick, though nowhere on this side of the marsh at all dense or very high; but about a mile from the shore there grew an almost impenetrable reed-brake, with stems as thick as one's fingers, and flowering tops rising some ten feet above the water. As we waded slowly through the shorter and more open reeds, dozens of Purple Herons, Night-Herons, and Little Egrets rose in front of us, while numbers of White-winged Black Terns flew over our heads, but for some time not a nest of any sort could we discover. At last a shout from our guide announced that he had found something, and on our getting up to him he pointed proudly to a Coot's nest containing nine eggs, and seemed much disgusted when he learned that this was not what we were looking for. On being questioned by Mr. B. H——, who speaks Turkish and Greek fluently, our crest-fallen guide told us that it was eggs of this colour that he had taken a few days before, and that he thought they were laid by the different kinds of Herons that were always to be seen in the marsh. Blue eggs, he told us, he had never seen. We found that we were unable to penetrate with the horses into the dense cane-brake, but, hoping to discover some nests of the White-winged Black Terns, we spent four hours riding all over the more open parts of the marsh. We failed to discover any of the floating nests of the Terns, and I do not think these birds could have yet commenced to build. We met with great numbers of Coots' nests, and some twenty nests of the Great Crested Grebe (*Podiceps cristatus*), though we never caught sight of either a Coot or a Grebe, as the birds always slipped off their nests and dived or swam away without showing themselves, so that the Turkish shepherd may be excused for believing that the eggs he had taken had

been laid by Egrets or Herons, which were everywhere very much in evidence. Numbers of Great Reed-Warblers (*Acrocephalus turdoides*) were uttering their harsh grating notes, just within the edge of the cane-brake, but we could find none of their nests, and I fancy that they too had not yet commenced to build.

I now felt pretty certain that the Herons were nesting somewhere in the middle of the great cane-brake, as there were said to be no trees of any kind growing in any part of the marsh, and on watching the birds I presently saw a Night-Heron with a reed in its bill. I watched it flying over the high flowering reeds until it disappeared in the distance. In a few minutes I saw another Night-Heron flying in the same direction, also with a reed in its bill, so we determined to ride round the edge of the marsh to a point of high ground from which we thought we would be able to see exactly where these birds, which were evidently building their nests, were settling. It was about 1 o'clock and most intensely hot when we reached the point we were making for, a piece of rising ground close to the ruins of the old Greek city of Pergamos, lying in an angle between the marsh and a bend of the Meander. Here we saw a specimen of that very handsome bird the Smyrnan Kingfisher (*Halcyon smyrnensis*), and here, too, we found an encampment of gipsies, who, being fishermen, possessed a small flat-bottomed boat. These people said they knew where the Herons and Egrets were breeding, but protested that it was impossible to get there with their boat, as the reeds were so thick. They also said that a pair of Swans nested in the reed-bed, and had already got young ones; these Swans which nest in Asia Minor are wild Mute Swans (*Cygnus olor*). With a great deal of persuasion we at last induced two strong young gipsies to make the attempt to take Mr. B. H—— and myself into the reed-bed. At first they punted the boat rapidly along through light reeds, which, however, gradually became denser, until, when we presently got into the big cane-brake, our progress became very slow, and we were often able to advance at all only by getting into the water, which was about four

feet deep, and all pushing together. At length, after a couple of hours' hard work, we pushed our boat into a little open lagoon in the middle of the cane-brake and at once saw that we were close upon the nesting-site of a great bird-colony. Glossy Ibises, Night-Herons, and Little Egrets rose in clouds from the reeds, just beyond the lagoon, and among them were a few pairs of Great White Egrets and Squacco Herons, but there did not appear to be any Common or Purple Herons in the colony. After crossing the lagoon, we worked the boat for some twenty yards further into the reeds, and then saw numbers of nests in front of us. Two nests, with eggs somewhat larger than those of either the Common or the Purple Heron, were rather bulky, and were built on broken-down reeds, some three feet above the water. These two nests were very like nests of the Purple Heron which I have seen in Hungary, but as we saw no Purple Herons here, and as we did see several pairs of Great White Herons, I feel sure that they belonged to the latter bird. One of these nests contained two, and the other four eggs. All the other nests, those of the Glossy Ibis, Little Egret, Night-Heron, and Squacco Heron, were built of reeds right down on the surface of the water. The Little Egrets had been, I think, the first to lay; at least all the nests that had full clutches were, I believe, those of Little Egrets. The Ibises and Night-Herons were only just beginning to lay. The dark greeny blue eggs of the former were of course unmistakable, and those nests which we took to belong to Night-Herons were, many of them, empty, while none of them contained more than two eggs; these eggs appearing to me to be all somewhat larger than the full clutches which, I think, belonged to the Little Egrets. We found two nests of the Squacco Heron with eggs, and one Pygmy Cormorant's nest with four eggs. After collecting and marking a few eggs of each species we set out on our return journey, and, getting back to the gipsy encampment by 5 o'clock, reached Sakizbounou just as it was growing dusk. The gipsies told us that the Wild Swans always nested in the centre of one of the little open lagoons in the great

reed-bed, building an enormous nest, which would support the weight of two men.

On the following day, May 14th, we paid a visit to the lake, making an early start in the cool of the morning, although we had been up till past midnight blowing eggs. On our way to the lake we followed the course of a small muddy-looking river—an outlet, I think, to the sea. Along the banks of this stream grew numerous wild tamarisk-bushes, and in these we found several Penduline Tits' nests. They were all suspended at the ends of branches overhanging the water, and could have been reached more easily from a boat than from the banks. Some of these nests contained eggs, and the others appeared to be just ready for eggs; all the eggs we examined being pure white, and very much elongated. On reaching the lake-shore, we embarked in a good-sized boat, manned by four oarsmen, and, after three hours' hard row, reached two small rocky islands. Here stood the ruins of old Genoese forts, which had been captured and destroyed by the Turks in bygone times. As we approached the islands we saw numerous Ruddy Sheld-ducks (*Casarca rutila*) sitting perched on the ruined walls. There must have been quite a dozen pairs of these birds, and as we drew near them they flew round us continually, uttering loud discordant cries. These Ruddy Sheld-ducks nest in holes among the rocks at the foot of the walls, but, though we found four of their nests, we did not get so much as an addled egg, the young birds having all been safely hatched out. Where these young broods were was a mystery, as we saw none of them on the open water round the islands. I found a Rock-Dove's nest, with fresh eggs, in a hole in one of the massive walls, also numbers of Jackdaws' nests, some with eggs, and some with young birds. On a long spit of sand running out from one of the islands I noticed a Lesser Ringed Plover, and by the exercise of a little patience found the nest, with four eggs, which were very slightly incubated. We got back to the inn at 5 P.M. While being rowed backward and forward over the lake we saw a great many Crested Grebes, which doubtless nest in the marsh, and come to the

open water to feed. We also saw two pairs of Sea-Eagles, and a nest of these birds, a huge pile of sticks, in a great fir-tree placed on the hillside above the lake. This nest we did not attempt to inspect, as it was much too late in the season for eggs.

After reaching the inn we had something to eat, and then packed up our things and started for Sokia. On the plain near the Meander we saw great numbers of Calandra Larks (*Melanocorypha calandra*), but had no time to look for their nests. Seeing a Pied Kingfisher (*Ceryle rudis*) enter a hole in the bank of the Meander, we dug it out, and besides catching the bird obtained six perfectly fresh eggs. We reached Mr. B. H——'s house in Sokia soon after 11 o'clock and got to bed at midnight.

The next morning, May 15th, we were up at 4 and rode to an old deserted farmhouse some three miles from Sokia, where we got some more Lesser Kestrels' eggs; we also found a large colony of Spanish Sparrows, which had built not only all round a Stork's nest, but also all over the branches of the tree in which the Stork's nest stood. There must have been more than a hundred Sparrows' nests in this tree, and nearly all that I examined contained eggs; the full and usual clutch appearing to be six. On our way back to breakfast we found the nest of a Black-headed Bunting (*Emberiza melanocephala*) with two eggs; this nest was placed in a high hedge. After breakfast we took a look round Mr. H——'s garden, and found two Goldfinches' nests and three of the Olivaceous Warbler. The Goldfinches' contained second broods, and one of the nests was so slightly built that, although the bird was sitting on it when we first observed it, the light showed through it. The small compact nests of the Olivaceous Warblers were built among the spines of a species of fir-tree, at a height of ten or twelve feet from the ground, and could with difficulty be seen; they all contained fresh eggs, four appearing to be the full clutch. At midday I bade adieu to my kind friend Mr. B. H——, whose cheery companionship and knowledge of Greek and Turkish had added so much both to the pleasure and to the success of my trip, and took

train for Smyrna, which I reached at 4 P.M., and then drove at once to Bournabat.

On the following day, May 16th, I revisited the salt-lagoons along the coast near Smyrna. On the little island which I had previously explored I found several clutches of Pratincoles' eggs (*Glareola pratincola*). For a long time I could discover nothing, as I looked for these eggs on the expanses of sun-dried mud, on which I thought these birds were accustomed to lay, and on which I saw them standing or crouching with outstretched wings. At last I began to search among the heathery scrub with which much of the island was covered, and soon found several clutches of three richly-marked eggs, always laid on the bare ground among, and often quite overshadowed by, the bushy plants. Among these bushes I also found three eggs of a Kentish Plover (*Ægialitis cantiana*). On some banks of bare sand at the water's edge I discovered a number of Lesser Terns (*Sterna minuta*) breeding, as well as a few Common Terns (*Sterna fluviatilis*), and another pair of Kentish Plovers.

Having slept in the launch that night, I visited on the following morning some more salt-lagoons on a part of the coast a little nearer to Smyrna. On an island in one of these lagoons we found a colony of Gull-billed Terns (*Sterna anglica*). These birds had not long commenced laying, for although I found a good number of nests with the full clutch of three eggs, there were numbers containing only one or two. In most cases the eggs had been laid on the bare ground, without any attempt at a nest, in small bare places among the scrubby kind of heathery plants I have before spoken of. On this island I found a few more Pratincoles' eggs, also among the scrub, but at some distance from the Gull-billed Terns' nests. On some stretches of open sand round the edges of this island I found Lesser and Common Terns breeding, and also took the three eggs of a pair of Oystercatchers, which I had remarked when we first landed. There were a pair of Avocets (*Recurvirostra avocetta*) and a good many Kentish Plovers on the island too, but I was unable to discover where they had placed their eggs, if they had any.

I found two nests of the Yellow-legged Herring-Gull (*Larus cachinnans*), one with three and the other with two eggs; these being indistinguishable from those of the common Herring-Gull of our British coasts. I believe that the Mediterranean Black-headed Gull must breed on this coast of Asia Minor, but I could get no information on this point. On some mudbanks in the salt-lagoon I saw a flock of about fifty small wading birds, which I am almost sure were Dunlins (*Tringa alpina*), also a number of Curlews, which may have been Slender-billed Curlews (*Numenius tenuirostris*). I got back to Bournabat at 4 o'clock on the afternoon of the 17th, and, taking a stroll round the fields skirting the village, found three nests of the Grey-backed Warbler (*Aëdon familiaris*) and several of the Black-headed Bunting (*Emberiza melanocephala*). These two species, both very common, were now just commencing to lay. Both species choose similar situations for their nests, in rather open bushes, usually not many feet from the ground; but while the Grey-backed Warblers' nests are very large, loose structures, lined with an abundance of wool and camel's hair, and with a very shallow open cup, those of the Black-headed Bunting, though also large and somewhat loosely built, are deeper and more neatly finished inside, and as a rule are not lined with hair.

May 18th was my last day in Bournabat, and I spent it with Demetrius nest-hunting in the neighbourhood of the village. We found several Masked Shrikes' nests (*Lanius nubicus*), which were all built on olive-trees and from eight to ten feet above the ground. These nests were always placed on a thick branch, in the same situation that a Missel-Thrush's nest might occupy. They were much smaller and neater—indeed, little more than half the size of the nests of either the Lesser Grey Shrike (*Lanius minor*) or the Woodchat-Shrike (*Lanius pomeranus*), of which latter bird we also found a number of nests, some of them in bushes, but most of them in olive-trees.

On May 19th I said goodbye to my kind friends in Bournabat, and, going on board the steamer at Smyrna, started for Hungary the same afternoon.

During the fourteen days I spent in Asia Minor I travelled over a good deal of country, and utilized every hour possible in looking for nests.

I took the eggs of the following species :—

- (1) Black-eared Wheatear (*Saxicola albicollis*).
- (2) Orphean Warbler (*Sylvia orphea*).
- (3) Olivaceous Warbler (*Hypolais pallida*).
- (4) Grey-backed Warbler (*Aëdon familiaris*).
- (5) Penduline Titmouse (*Aegithalus pendulinus*).
- (6) Eastern Rock-Nuthatch (*Sitta syriaca*).
- (7) Woodchat-Shrike (*Lanius pomeranus*).
- (8) Masked Shrike (*Lanius nubicus*).
- (9) Swallow (*Hirundo rustica*).
- (10) Martin (*Chelidon urbica*).
- (11) Goldfinch (*Carduelis elegans*).
- (12) Spanish Sparrow (*Passer salicicola*).
- (13) Cretzschmar's Bunting (*Emberiza cæsia*).
- (14) Black-headed Bunting (*Emberiza melanocephala*).
- (15) Crested Lark (*Galerita cristata*).
- (16) Short-toed Lark (*Calandrella brachydactyla*).
- (17) Calandra Lark (*Melanocorypha calandra*).
- (18) Common Jay (*Garrulus glandarius*).
- (19) Magpie (*Pica rustica*).
- (20) Jackdaw (*Corvus monedula*).
- (21) Pied Kingfisher (*Ceryle rudis*).
- (22) Egyptian Vulture (*Neophron percnopterus*).
- (23) Lesser Kestrel (*Falco tinnunculus*).
- (24) Pygmy Cormorant (*Phalacrocorax pygmaeus*).
- (25) Great White Heron (*Ardea alba*).
- (26) Little Egret (*Ardea garzetta*).
- (27) Squacco Heron (*Ardea ralloides*).
- (28) Night-Heron (*Nycticorax griseus*).
- (29) White Stork (*Ciconia alba*).
- (30) Glossy Ibis (*Plegadis falcinellus*).
- (31) Rock-Dove (*Columba livia*).
- (32) Chukar Partridge (*Caccabis chukar*).
- (33) Common Coot (*Fulica atra*).
- (34) Common Crane (*Grus communis*).
- (35) Great Bustard (*Otis tarda*).
- (36) Common Pratincole (*Glareola pratincola*).
- (37) Kentish Plover (*Aegialitis cantiana*).
- (38) Lesser Ringed Plover (*Aegialitis curonica*).
- (39) Oystercatcher (*Hæmatopus ostralegus*).
- (40) Common Tern (*Sterna fluvialis*).

- (41) Little Tern (*Sterna minuta*).
- (42) Gull-billed Tern (*Sterna anglica*).
- (43) Yellow-legged Herring-Gull (*Larus cachinnans*).
- (44) Great Crested Grebe (*Podiceps cristatus*)

N.B.—I did not personally find the nest of a Great Bustard, but the fresh egg of one of these birds was brought to me during my visit to Appa; it had been taken from a cornfield in the plain near the station.

#### XXIV.—*An Ornithological Expedition to the Zambesi River.*

By BOYD ALEXANDER, F.Z.S.

[Concluded from p. 109.]

##### 165. INDICATOR SPARRMANI Steph.

This Honey-guide was first met with near Zumbo, and became more plentiful further up the river, especially in well-wooded districts, where we observed it in small parties that kept much to the tops of high trees. In December they were in a moulting condition. The natives disapproved very much of our shooting these birds, which, they said, often enabled them to find the nests of bees. There appears to be some truth in this, when the following incident is considered. On October 7 we landed on a small well-wooded island, which we commenced to explore. On the ground, under a thicket, one of these Honey-guides was observed busily but silently searching after food. We shot the bird, not knowing, however, what it was at the time, and as the thicket was almost impenetrable we sent in one of our native boys to get the specimen. Meanwhile we had left the spot and were continuing our investigation of the small island, but on looking back a short time afterwards we found that our boys were not following us. Eventually, on retracing our steps, we discovered them on their hands and knees about twenty paces from the place where we had shot the Indicator. A fire had been lighted, while one of them was busy with his axe unearthing something from the ground. This proved to be a big bees'-nest. Our boys made short work of the black-looking honey, large pieces with grubs